

KP-FD500SCL KP-FD202SCL KP-FD140SCL



KP-FD500SCL



KP-FD202SCL/KP-FD140SCL



Main Features

Mini CL (Mini Camera Link)

By adopting a Camera Link digital interface, higher speed video data transfer is possible. Furthermore, by adopting the small connector (SDR) of a Mini Camera Link standard, the size of the camera has been reduced.

PoCL (Power over Camera Link)

The PoCL version is connected by a single (PoCL) Mini Camera Link cable directly to a frame grabber supporting PoCL. Simple systems construction is possible.

High Resolution & High Speed

High resolution combined with high frame rates are possible with this series of cameras. Can be used for high-precision and high-speed image processing in many applications.

KP-FD500SCL	5.05 Megapixel	12 fps
KP-FD202SCL	2.01 Megapixel	30 fps
KP-FD140SCL	1.45 Megapixel	30 fps

Frame shutter

Higher resolution in the vertical direction is ensured for moving object.

Multi-step Shutter

A multi-step electric shutter along with a variable speed electric shutter is standard with a minimum shutter speed of 1/100,000 second.

Remote Control

Through the Camera Link interface, various setting such as shutter, mode, gain, partial scan, bit depth, etc can be adjusted.

Frame on Demand

A one trigger and fixed shutter mode of frame-on-demand are provided allowing precise timing and exposure for image capture.

Selectable bit depth

Selectable bit depth of 36-/30-/24-bit

Partial Scan

The start position and height of the image can be adjusted. Higher frame rates are possible by using partial scan mode.

High Color Fidelity

RGB primary color mosaic filter and 14-bit accelerated DSP achieve a high

Selectable White Balance Adjustment

Selectable white balance adjustment method of ATW (auto-tracking). Manual (manual setting of R and B gain) or One-push (one-push auto adjustment)

6-Vector Independent Masking

A 6-Vector color corrector can be selected, allowing independent adjustment of the hue and saturation of the primary R,G,B, and complementary Cy, Mg, and Ye vectors, for accurate color reproduction of difficult objects.

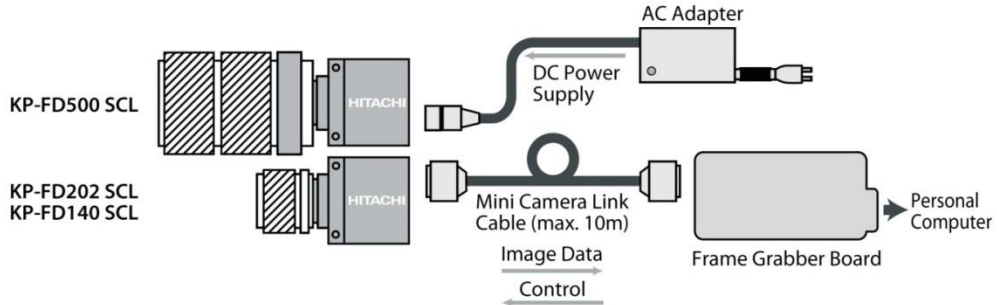
Specification

	KP-FD500SCL	KP-FD202SCL	KP-FD140SCL
Imaging device	2 / 3-inch progressive scan interline CCD	1 / 1.8-inch progressive scan interline CCD	1 / 2-inch progressive scan interline CCD
Total pixels	2536 (H) x 2068 (V)	1688 (H) x 1248 (V)	1434 (H) x 1050 (V)
Effective pixels	2456 (H) x 2058 (V)	1628 (H) x 1236 (V)	1392 (H) x 1040 (V)
Pixel size	3.45 μm (H) x 3.45 μm (V) (square lattice)	4.4 μm (H) x 4.4 μm (V) (square lattice)	4.65 μm (H) x 4.65 μm (V) (square lattice)
Color filter	RGB primary color mosaic filter		
Sensing area	8.45 mm (H) x 7.07 mm (V)	7.13 mm (H) x 5.37 mm (V)	6.32 mm (H) x 4.76 mm (V)
Scanning system	Progressive		
Aspect ratio	5 : 4	4 : 3	
Frame rate	12 frames per second (full pixel readout)	30 frames per second (full pixel readout)	
Horizontal drive frequency	48.0000 MHz	72.0000 MHz	57.6000 MHz
Horizontal scanning frequency	24.922 kHz	37.5 kHz	32.179 kHz
Vertical scanning frequency	11.99 Hz	29.95 Hz	30.13 Hz
Sync system	Internal		
Lens mount	C mount (Flange focal distance = 17.526 mm)		
Video output			
interface	Camera Link 64.0000 MHz	Camera Link 72.0000 MHz	Camera Link 57.6000 MHz
Protocol	Base configuration (1ch : SDR connector x 1pc) Medium configuration (2ch : SDR connector x 2pcs)		
Output format	(a) 24bits (R : 8bit G : 8bit B : 8bit) (Base configuration) (b) 30bits (R : 10bit G : 10bit B : 10bit) (Medium configuration) (c) 36bits (R : 12bit G : 12bit B : 12bit) (Medium configuration)		
Output image size	2448 (H) x 2050 (V) (full pixel readout)	1620 (H) x 1220 (V) (full pixel readout)	1360 (H) x 1024 (V) (full pixel readout)
Sensitivity	2000 lx, F1.1, 3200K	2000 lx, F5.6, 3200K	
Minimum illumination	5 lx (F1.4, MAX GAIN)	10 lx (F1.4, MAX GAIN)	
Signal noise to ratio	48 dB		
Electric shutter	OFF, 1 / 12, 1 / 60, 1 / 100, 1 / 250, 1 / 1000, 1 / 2000, 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second)	OFF, 1 / 30, 1 / 60, 1 / 100, 1 / 250, 1 / 1000, 1 / 2000, 1 / 10000, 1 / 50000 second OFF is normal exposure (frame rate) or changeable by variable shutter (Minimum 1 / 00000 second)	
Frame on demand			
Mode	(A) Fixed shutter mode (8 steps or variable) (B) ONE trigger mode (C) VD reset mode		
Trigger input	Camera Link (CC1) or DCIN / SYNC connector		
Partial scan	Selectable start position and height of picture grabbing in 1H step.		
ALC (Auto level control)	Mode : (A) AGC (Auto gain control) (B) AES (Auto electric shutter) (C) AGC & AES Video Level : Adjustable		
Gain	Auto / Manual (0 to +12dB) (Approx. 0.0358dB step)	Auto / Manual (0 to +18dB) (Approx. 0.0358dB step)	
White balance	ATW / MANUAL / One - push		
Gamma	OFF (=1) / LUT		
Color masking	OFF / ON (6 vector independent masking)		
Paint black	Adjustable		
Sharpness	Adjustable		
Brightness	Adjustable		
Knee	Adjustable		
Power supply voltage	12 ± 1 VDC		
Current consumption	Approx. 310 mA (Approx. 3.7 W)	Approx. 340 mA (Approx. 4.1 W) *When partial scan is ON, Approx. 415 mA (Approx. 5.0 W)	Approx. 300 mA (Approx. 3.6 W)
Ambient temperature			
Performance	0 to +40 °C (+32 to +104 °F), less than 90 % RH		
Operation	10 to +50 °C (+14 to 122 °F), less than 90 % RH		
Storage	-20 to +60 °C (-4 to 140 °F), less than 70 % RH (without dew condensation)		
Vibration endurance	10 to 55Hz (2.37 to 71.7m / S ²), Sweep 1 minute, 30 minutes for each 3 axis		
Shock endurance	490.3 m / s ² (Once for each side of top, under, left and right)		
External dimensions	44 (W) x 44 (H) x 41 (D) mm (not including mount protrusions)		
Mass	Approx. 110g		

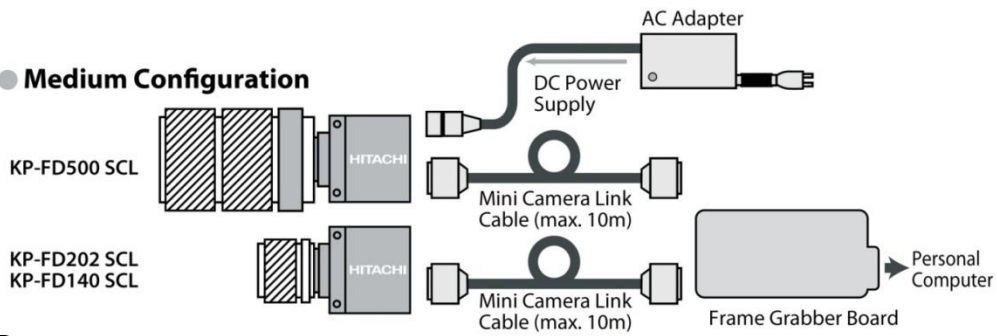
System configuration

SCL System

● Base Configuration



● Medium Configuration



Dimension

